

CLAIMS

1. A method for packet messaging in a communication system including a header compressor unit (20) and a header decompressor unit (22),
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transmitting a mode change request involving a change from a first compression mode to a second compression mode from the header decompressor unit to the header compressor unit over a packet transfer link (11), and being **characterized by** the further steps of

10 indicating, at the header compressor unit, rejection of the mode change request towards the header decompressor unit;

performing, if the header decompressor unit is aware of the indicated rejection, a rejection acknowledgement action at the header decompressor unit, said rejection acknowledgement action implying a successful rejection; and

15 remaining, at the header compressor unit, in the first compression mode in response to a successful rejection.

2. The method of claim 1, **characterized in that** the indicating step comprises signaling, implicitly at or explicitly from the header compressor 20 unit (20), rejection of the mode change request.

3. The method of claim 2, **characterized in that** the indicating step comprises sending a mode change rejection message from the header compressor unit (20) to the header decompressor unit (22).

25 4. The method of claim 3, **characterized in that** the mode change rejection message comprises a redefined mode value.

30 5. The method of claim 2, **characterized in that** the indicating step comprises ignoring, at the header compressor unit (20), the mode change request for a predetermined period of time.

6. The method of claim 3 or 4, **characterized by**, in case of an unsuccessful rejection by the mode change rejection message, further rejection signaling by ignoring, at the header compressor unit (20), the mode change request for a predetermined period of time.

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7. The method of claim 1, **characterized in that** the rejection acknowledgement action involves decreasing the frequency of mode change request transmissions from the header decompressor unit (22) in response to the indicated rejection.

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8. The method of claim 1, **characterized in that** the rejection acknowledgement action involves aborting further mode change request transmission from the header decompressor unit (22) in response to the indicated rejection.

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9. The method of claim 8, **characterized in that** the rejection acknowledgement action involves sending a rejection acknowledgement message from the header decompressor unit (22) to the header compressor unit (20) in response to the indicated rejection.

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10. The method of any of previous claims, **characterized by** the further step of determining, at the header compression unit (20), whether the rejection was successful by monitoring the packet transfer link (11).

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11. The method of any previous claims, **characterized by** the further step of changing to the second compression mode at the header compressor unit (20) in case of an unsuccessful overall rejection procedure.

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12. The method of any of previous claims, **characterized in that** the header compressor unit (20) is arranged to support only a subset of all possible compression modes.

13. The method of any of previous claims, **characterized in that** at least one of the header compressor unit (20) and the header decompressor unit (22) is implemented according to a robust header compression (ROHC) scheme.
- 5 14. The method of claim 13, **characterized in that** the first and second compression modes are selected from the group of a unidirectional (U) mode, a bidirectional optimistic (O) mode, a bidirectional reliable (R) mode and a bidirectional (B) mode, including combinations thereof.
- 10 15. A communication system for packet messaging comprising a header compressor unit (20), a header decompressor unit (22) and means for transmitting a mode change request involving a change from a first compression mode to a second compression mode from the header decompressor unit to the header compressor unit over a packet transfer link (11), said communication system being **characterized by**
 - means for indicating, at the header compressor unit, rejection of the mode change request towards the header decompressor unit;
 - means for performing, if the header decompressor unit is aware of the indicated rejection, a rejection acknowledgement action at the header decompressor unit, said rejection acknowledgement action implying a successful rejection; and
 - means for remaining, at the header compressor unit, in the first compression mode in response to a successful rejection.
- 15 16. The communication system of claim 15, **characterized in that** the means for indicating comprises means for signaling, implicitly at or explicitly from the header compressor unit (20), rejection of the mode change request.
- 20 17. The communication system of claim 16, **characterized in that** the means for indicating comprises means for sending a mode change rejection message from the header compressor unit (20) to the header decompressor unit (22).

18. The communication system of claim 17, **characterized in that** the mode change rejection message comprises a redefined mode value.
 19. The communication system of claim 16, **characterized in that** the means for indicating comprises means for ignoring, at the header compressor unit (20), the mode change request for a predetermined period of time.
 20. The communication system of any of claims 15-19, **characterized by** means for aborting further mode change request transmission from the header decompressor unit (22) in response to the indicated rejection.
 21. The communication system of claim 20, **characterized by** means for sending a rejection acknowledgement message from the header decompressor unit (22) to the header compressor unit (20) in response to the indicated rejection.
 22. The communication system of any of claims 15-21, **characterized by** means for monitoring the packet transfer link (11) to determine, at the header compression unit (20), whether the rejection was successful.
 23. The communication system of any of claims 15-22, **characterized in that** the header compressor unit (20) is arranged to support only a subset of all possible compression modes.
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24. The communication system of any of claims 15-23, **characterized in that** at least one of the header compressor unit (20) and the header decompressor unit (22) is implemented according to a robust header compression (ROHC) scheme.
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 25. The communication system of claim 24, **characterized in that** the first and second compression modes are selected from the group of a unidirectional

(U) mode, a bidirectional optimistic (O) mode, a bidirectional reliable (R) mode and a bidirectional (B) mode, including combinations thereof.

26. A header compressor unit (20) for packet data communication comprising means for receiving, from a header decompressor unit (22), a mode change request involving a change from a first compression mode to a second compression mode over a packet transfer link (11), and being characterized by

means for indicating rejection of the mode change request towards the header decompressor unit;

means for interpreting the signaling behavior of the header decompressor unit to determine whether the rejection was successful; and

means for remaining in the first compression mode in response to a successful rejection.

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27. The header compressor unit of claim 26, characterized in that the means for indicating comprises means for sending a mode change rejection message to the header decompressor unit (22).

20 28. The header compressor unit of claim 27, characterized in that the mode change rejection message comprises a redefined mode value.

25 29. The header compressor unit of claim 26, characterized in that the means for indicating comprises means for ignoring the mode change request for a predetermined period of time.

30 30. The header compressor unit of any of claims 26-29, characterized in that the means for interpreting comprises means for monitoring the packet transfer link (11).

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31. The header compressor unit of any of claims 26-30, characterized by being arranged to support only a subset of all possible compression modes.

32. The header compressor unit of any of claims 26-31, **characterized by** being implemented according to a robust header compression (ROHC) scheme with the first and second compression modes selected from the group of a unidirectional (U) mode, a bidirectional optimistic (O) mode, a bidirectional reliable (R) mode and a bidirectional (B) mode, including combinations thereof.